**Design Specifications**

1. Customer Needs. What does the customer want/need?

Based on research, the intended customers want a product that will prevent gum from sticking to their shoes.

1. Performance. What must the product be able to do? Be specific.

The product should be able to prevent any chewed gum that is stepped on from sticking to the shoe.

1. Target Cost. What is the anticipated cost to the consumer for this product?

We are not exactly sure of this yet, since we need discover how much it would cost to make and we need also finish analyzing all the surveys to see what the customer would consider a good price.

1. Size and Weight. What size should the product be, or what restrictions to size exist? What are the weight restrictions on the product?

Our product will always be limited by size and weight. It has to be on the bottom of a shoe, so it must come in different sizes or be customizable. It has to be light enough and thin enough not to hinder walking.

1. Aesthetics. Are there preferences in the appearance features of the product (color, surface treatment, shape, material)? If so, describe them.

It would be in our best interest to provide a clear version (transparent) and perhaps a more stylish option (patterns and various colors).

1. Materials. Is there a specific material or materials that must be used? If yes, describe it.

Most of the challenges involved in this product’s development will be the creating of the actual material that prevents gum from sticking to it.

1. Safety and Legal Issues. Identify potential safety and legal issues that may arise from the use of this product.

We need to make sure that the shoe still provides enough traction for proper walking (walking without slipping) while still resisting the gum.

1. Ergonomics. Identify considerations for the ergonomics of the product.

Since our product goes on the bottom of shoes, it must not interfer with how the customer moves in their shoes. The shoes must still be comfortable. If the customer slips more than usual, then they will most likely not use our product.

1. Operating Environment. Identify the environmental conditions relevant to the manufacture and use of the product (temperature, corrosion potential, dust or dirt, pressure, humidity, vibration, noise, degree of abuse, etc.).

Our product is aimed at the outside urban environment. It needs to stand up to any weather conditions that would be present in a large city. It does not need to stand up against “extreme weather conditions such as hurricanes or blizzards, but never the less, duribility is important.

1. Global Environment. Will the product include any toxic or dangerous substances? What is the plan for disposal of the product at the end of its useful life?

As of right now, we do not foresee the need to use any known dangerous or toxic chemicals in our product. If it turns out that our product is a spray, then it would be flammable (from the aerosol).

1. Service Life. What is the required service life of the product?

We intend for our product to be disposable. It is not intended for long term use.

1. Product Life. What is the anticipated length of time that the product will be produced before it is replaced by a newer version or alternate product?

Our product looks to solve a very unique, specifc problem. I do not forsee any new product overtaking or replacing it soon.

1. Durability and Maintenance. Will the product require routine maintenance during its service life? If yes, answer the following.

Our product will not require maintenance because it is meant to be disposable.

* + 1. What specific parts of the product must have easy access for maintenance?
    2. What is the anticipated maintenance schedule?
    3. Are special tools required? How will they be acquired?
    4. Will replacement parts be required? How will they be acquired?

1. Additional Criteria